

**REAL-TIME PROCESS CONTROL FOR**  
**OPTICAL COMPONENT FABRICATION**

Abstract

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A method and system for controlling the fabrication of an optical device having a given property at a defined wavelength. The method comprises the steps of providing a substrate, depositing a material on the substrate to form a film thereon, and controlling a set of manufacturing parameters as the film is being formed on the substrate to make the

10 optical device. The method comprises the further steps of generating an optical signal having a given wavelength, dithering the wavelength of the optical signal, and applying the dithered optical signal to the film being formed on the substrate to modulate the optical signal. A correlation signal is generated to represent the difference between the given wavelength and the defined wavelength, and that correlation signal is used to

15 adjust at least one of the manufacturing parameters to make the optical device with said given property at the defined wavelength.